

CLAIMS

- 5        1 A classic infectious bursal disease virus (IBDV) mutant that expresses a VP2 protein that binds with monoclonal antibody (moab) B69, characterised in that the VP2 protein also binds with moab 67, secreted by hybridoma cell lines HB-9437 and HB-11122, deposited at the ATCC, Rockville, USA, respectively.
- 10       2 A classic IBDV mutant according to claim 1, characterised in that the VP2 protein binds with moab B69, moab 67 and moab R63, secreted by hybridoma cell line HB-9490, deposited at the ATCC, Rockville, USA.
- 15       3 A classic IBDV mutant according to claim 1, characterised in that the mutant comprises one or more mutations in a classic VP2 coding region, such that the coding region comprises,  
         (i) a codon for the amino acid at position 222 encoding serine or threonine, and  
         (ii) a nucleotide sequence encoding an amino acid sequence shown in any of the SEQ ID. No. 1-5 at positions 318-323.
- 20       4 A classic IBDV mutant according to claim 3, characterised in that the coding region comprises a codon for the amino acid at position 330 encoding arginine or serine.
- 25       5 A classic IBDV mutant according to claims 1-4, characterised in that the mutant comprises one or more mutations in a VP2 coding region of IBDV strain D78.
- 6 A classic IBDV mutant according to claims 1-5, characterised in that the mutant comprises a genomic segment A of a classic IBDV, preferably of IBDV strain D78.
- 30       7 A vaccine for use in the protection of poultry against disease caused by IBDV infection, characterised in that the vaccine comprises a classic IBDV mutant according to claims 1-6, together with a pharmaceutical acceptable carrier or diluent.
- 35       8 A vaccine according to claim 7, characterised in the classic IBDV mutant is in a live form.

- 9 A vaccine according to claim 7 or 8, characterised in that the vaccine further comprises one or more vaccine components of other pathogens infectious to poultry.
- 5      10 A vaccine according to claims 7-9, characterised in that the vaccine comprises an adjuvant.
- 10      11 A method for the preparation of a classic IBDV mutant according to claims 1-6, characterised in that the classic IBDV mutant is propagated in a cell culture and subsequently harvested from the cell culture.
- 15      12 A method for the preparation of a vaccine according to claims 7-10, characterised in that a classic IBDV mutant according to claims 1-6 is mixed with a pharmaceutical acceptable carrier or a diluent.
- 20      13 A method for the preparation of a classic infectious bursal disease virus (IBDV) mutant that expresses a VP2 protein that binds with monoclonal antibody (moab) B69 and moab 67, secreted by hybridoma cell lines HB-9437, and HB-11122, deposited at the ATCC, Rockville, USA, respectively, characterised in that one or more mutations are introduced in a VP2 coding region of a classic IBDV strain, such that ,
- 25      (i) a codon for the amino acid at position 222 encodes serine or threonine, and
- 30      (ii) a nucleotide sequence encoding an amino acid sequence for positions 318-323 encodes an amino acid sequence shown in any of the SEQ ID No. 1-5.
- 35      14 A method according to claim 13, characterised in that the mutation is introduced in the codon for the amino acid at position 222 in a VP2 coding region of a classic IBDV strain that comprises a nucleotide sequence encoding the amino acid sequence shown in SEQ ID No. 1.
- 30      15 A method according to claim 13 or 14, characterised in that the VP2 protein also binds with moab R63, secreted by hybridoma cell line HB-9490, deposited at the ATCC, Rockville, USA.
- 35      16 A method according to claims 13-15, characterised in that the VP2 coding region comprises a codon for the amino acid at position 330 encoding arginine or serine.

17 A method according to claims 13-17, characterised in that the one or more mutations are introduced in a VP2 coding region of IBDV strain D78.

5       18 A method according to claims 13-17, characterised in that the one or more mutations are introduced in a genomic segment A of a classic IBDV, preferably of IBDV strain D78.

10       19 A method for the preparation of a vaccine for use in the protection of poultry against disease caused by IBDV infection, characterised in that a classic IBDV mutant prepared according to a method described in claims 13-18 is mixed with a pharmaceutical acceptable carrier or a diluent.